

AMENDMENTS TO THE CLAIMS

Claims 1-20. (Cancelled)

21. (New) An optical module, comprising:

an optical semiconductor element;

a mounting member having a mounting portion and a supporting face;

a lens optically coupled to said optical semiconductor element, said optical semiconductor element and said lens being arranged on a predetermined axis; and

a lens holding member having an end portion, another end portion, a side wall portion and an extending portion, said lens holding member being welded to said supporting face of said mounting member at said end portion, said extending portion having a holding face extending in a direction of said predetermined axis for securing said lens, said side wall portion including a first inner surface extending from said end portion in a direction of said predetermined axis and a second inner surface extending from said extending portion in a direction of said predetermined axis, said first inner surface being located outside an inner reference surface and said second inner surface being located inside said inner reference surface, said inner reference surface extending in a direction of said predetermined axis to surround said mounting portion,

wherein said mounting member, said lens holding member and said lens seal said optical semiconductor element.

22. (New) The optical module according to claim 21,

wherein said first inner surface has an inclined face at said end portion of said lens holding member.

23. (New) The optical module according to claim 21,

further comprising a sleeve mounted on said other end portion of said lens holding member, said sleeve receiving an optical connector therein for optically coupling said optical semiconductor element with said optical connector.

24. (New) The optical module according to claim 21,
wherein said lens holding member is contained within a cylinder with a diameter of 4.5 mm and centered on said predetermined axis.

25. (New) An optical module, comprising:
an optical semiconductor element;
a mounting member having a mounting portion and a supporting face;
a lens optically coupled to said optical semiconductor element, said optical semiconductor element and said lens being arranged on a predetermined axis; and
a lens holding member having an end portion, another end portion, a side wall portion and an extending portion, said lens holding member being welded to said supporting face of said mounting member at said end portion, said extending portion having a holding face extending in a direction of said predetermined axis for securing said lens, said lens holding member, said lens and said mounting member sealing said optical semiconductor element, said side wall portion including a first outer surface extending from said end portion to a direction of said predetermined axis and a second outer surface extending from said other end portion in a direction of said predetermined axis, said first outer surface being located outside an outer reference surface and said second outer surface being located inside said outer reference surface,

said outer reference surface extending in a direction of said predetermined axis to surround said mounting portion,

wherein said first and second outer surfaces are provided such that an electrode of a seam sealer apparatus enables to hold said lens holding member.

26. (New) The optical module according to claim 25,
further comprising a welding portion having an inner edge and an outer edge for bonding said end portion of said lens holding member with said supporting face of said mounting member.

27. (New) The optical module according to claim 26,
wherein said lens holding member further includes a first inner surface, a center between said inner and said outer edges of said welding portion is positioned outside a center between said first inner surface and said first outer surface.

28. (New) The optical module according to claim 26,
wherein said first outer surface has an inclined face at said end portion of said lens holding member.

29. (New) The optical module according to claim 25,
wherein said lens holding member further includes a third outer surface provided between said first outer surface and said second outer surface, said third outer surface receiving force applied in a direction of said predetermined axis via said electrode of said seam sealer apparatus.

30. (New) The optical module according to claim 25,
further comprising a sleeve mounted on said other end portion of said lens holding member, said sleeve receiving an optical connector therein for optically coupling said optical semiconductor element with said optical connector.

31. (New) The optical module according to claim 25,
wherein said lens holding member is contained within a cylinder with a diameter of 4.5mm and centered on said predetermined axis.

32. (New) The optical module according to claim 25,
wherein said first outer surface has a first length and said second outer surface has a second length longer than said first length.

33. (New) An optical module, comprising:
an optical semiconductor element;
a mounting member having a mounting portion, a supporting face and a terminal electrically connected to said optical semiconductor element with a bonding wire;
a lens optically coupled to said optical semiconductor element, said optical semiconductor element and said lens being arranged on a predetermined axis; and
a lens holding member having an end portion, another end portion, a side wall portion and an extending portion, said lens holding member being welded to said supporting face of said mounting member at said end portion, said extending portion having a holding face extending in

a direction of said predetermined axis for securing said lens, said lens holding member, said lens and said mounting member sealing said optical semiconductor element, said side wall portion including a first inner surface extending from said end portion to a direction of said predetermined axis and a second inner surface extending from said extending portion in a direction of said predetermined axis,

wherein an interval between said second inner surface and said mounting member is greater than a maximum interval between said bonding wire and said mounting member.

34. (New) The optical module according to claim 33,
wherein a length of said first inner surface is greater than 0.5 mm.

35. (New) The optical module according to claim 34,
wherein said mounting member further provides a first face and a second face opposing said first face, said mounting portion being provided in said first face, and said terminal further includes an inner terminal portion projecting from said first face and an outer terminal portion projecting from said second face, and

wherein a length of said inner terminal portion is in a range of 0.2 mm to 0.4 mm.

36. (New) The optical module according to claim 33, further comprising a sleeve mounted on said other end portion of said lens holding member, said sleeve receiving an optical connector therein for optically coupling said optical semiconductor element with said optical connector.

37. (New) The optical module according to claim 33,
wherein said lens holding member is contained within a cylinder with a diameter of 4.5 mm and centered on said predetermined axis.